Dell OpenManage Cluster Configurator on Dell PowerEdge VRTX

This document provides an overview of the benefits and advantages of the Dell OpenManage Cluster Configurator when used with the PowerEdge VRTX

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Executive summary

The Dell OpenManage Cluster Configurator for Windows Server 2012 is a free factory-installed tool that greatly simplifies your Windows Server 2012-based failover cluster deployment on a Dell PowerEdge VRTX shared infrastructure platform. Using a configuration wizard that reduces each deployment to a handful of steps, the Cluster Configurator tool can have a two- or four-server failover cluster up and running in less than an hour compared to nearly three and a half hours using traditional manual configuration techniques.

Introduction

IT admins can now spend less time performing setup procedures and more time innovating on strategic IT issues when utilizing the Dell OpenManage Cluster Configurator for factory-installed versions of Windows Server 2012 running on the Dell PowerEdge VRTX shared infrastructure platform. The Dell OpenManage Cluster Configurator is a new wizard-based tool that simplifies and automates the deployment of a Windows Server 2012 Failover Cluster with minimal work for the end user. This utility facilitates configuration of Dell PowerEdge VRTX networking, shared storage and server nodes in just a few steps following boot-up and delivers a fully operational Hyper-V Failover Cluster.

Though a Failover Cluster can be created manually, it can be a time-consuming, multi-step process with opportunity for mistakes, especially if the IT Admin lacks knowledge or experience with Microsoft Windows Failover Clustering Services.

About the Dell PowerEdge VRTX

Supporting up to four PowerEdge M-series server nodes, the Dell PowerEdge VRTX includes all the necessary elements to meet remote and small-to-midsize office IT infrastructure performance needs in a single, power-efficient unit. The intuitive Chassis Management Controller is embedded within the platform and allows the user to perform remote management or local operations on all the hardware resources (e.g., servers, storage, networking, etc.) from a single Web interface.

Compared with a traditional on-site multi-platform hardware configuration, the Dell PowerEdge VRTX simplifies management, saves power and consumes less space. When combined with the Dell OpenManage Cluster Configurator, this platform delivers a reliable, easy-to-deploy, high availability solution.
Save time in your deployment with Dell PowerEdge VRTX and the OpenManage Cluster Configurator for Windows Server 2012

A highly desirable attribute of today’s server technology is the ability to minimize application downtime. One common method to provide reliable access to these application servers in the event of a hardware failure or required maintenance time is to create a high-availability failover cluster. This lets applications running on virtual machines transition from one server node to another with little to no downtime. When customers’ connectivity is essential, a failover cluster is an effective way to keep your business’ platform online, even when you need to bring a server offline for maintenance.

Figure 1. Clustered server nodes hosting application server VMs. In the event of a server shutdown, the VMs fail over to online nodes in the cluster.

An ordinary four-node failover cluster deployment can require many steps of setup and over three and a half hours of work for IT staff to complete. In contrast, the Dell OpenManage Cluster Configurator for Windows Server 2012 provides a series of easy-to-follow, wizard-based templates that automate the deployment of a four-node Windows Server 2012 Failover Cluster solution on the Dell PowerEdge VRTX within a mere 48 minutes of work using 75 percent fewer setup steps.\(^1\)

<table>
<thead>
<tr>
<th>Setting up the Dell PowerEdge VRTX with the Dell OpenManage Cluster Configurator</th>
<th>Deploying a four-node failover cluster manually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert the server nodes into the Dell PowerEdge VRTX and power them on.</td>
<td>Compile all the physical components of the configuration (server nodes, switches and storage).</td>
</tr>
</tbody>
</table>

\(^1\) Manually installing and configuring a four-node Windows Server 2012 Hyper-V cluster can take up to 92 steps. Installing and configuring a four-node Windows Server 2012 Hyper-V cluster using Dell OpenManage Cluster Configurator for Windows Server 2012 can take up to 23 steps, providing an improvement of up to 75 percent fewer steps.
Follow the guided wizard and enter the necessary information (e.g., domain name and IP scheme) on one server node.

Install Windows Server 2012, updates and drivers on each server node.

Set up the application server VMs when the wizard is finished.

Configure your host names, domain and networking for each server node.

Install the necessary server roles on each server node.

Configure the shared storage.

Run the validation, check and create the cluster.

Set up the application server VMs.

Many of the steps in manual deployment scenario must be repeated on each server node to be used in the cluster, making this an involved, time-consuming process. The convenience of the OpenManage Cluster Configurator lies in its speed and ease-of-use. To kick off the setup, simply power on the VRTX and follow the instructions on one of the server nodes. The Dell OpenManage Cluster Configurator wizard starts at boot-up, and automatically finds the other VRTX server nodes. IT admins follow a guided workflow requiring minimal steps, and the server nodes are then automatically configured properly as a Windows Server 2012 cluster. The configuration process takes place entirely in one node, and the single installation window makes progress easy to track. From power-on to cluster creation, the time required is approximately 48 minutes, a considerable decrease from the nearly three and a half hours required to build a cluster manually.

Choosing the Dell OpenManage Cluster Configurator as part of your Dell solution can benefit your deployments in multiple ways. The simplicity of this deployment means that an IT generalist can complete complex cluster setups, allowing specialists to focus on other tasks, reducing additional administrator training and overhead costs. In terms of time, the Dell OpenManage Cluster Configurator saves hours of work, with a mostly automated process that reduces setup time by 76.9 percent. When considering multiple remote office deployments, the time and cost savings can be even more significant.

In addition to quick deployment via the automated wizards, the OpenManage Cluster Configurator solution can further reduce deployment time by allowing your IT department to set up clusters by remote access via the VRTX server nodes' integrated Dell Remote Access Controller (iDRAC) with Lifecycle Controller interface. This means that a business with remote offices can immediately distribute the systems and omit having to first take the unit(s) to a centralized IT hub for configuration.

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2 Manually installing and configuring a four-node Microsoft Windows Server 2012 Hyper-V cluster can take up to 3 hours and 28 minutes. Installing and configuring a four-node Windows Server 2012 Hyper-V cluster using Dell OpenManage Cluster Configurator for Windows Server 2012 can take up to 48 minutes, providing up to a 76.9 percent improvement in deployment time.
Summary

The benefits of using the OpenManage Cluster Configurator tool in conjunction with a Dell PowerEdge VRTX shared infrastructure solution are clear. Customers can take a PowerEdge VRTX from out-of-box to an up-and-running Windows Server 2012 failover cluster system with ease and speed — making setup of your small or remote branch office IT environments faster than ever before.